

## 5 Mega-Pixel Lens (Manual Iris Lens, compatible with 5 mega-pixel cameras)

### Features

**FA lenses for use with 5 mega-pixel resolution and image processing**

**There are five types, beginning with an 8 mm focal length close-up lens**

These manual iris lenses support 5 mega-pixels (2/3" format). They are perfect for inspection, pattern matching, and alignment uses in which images with high definition from edge to edge definition are needed for large subjects such as wafers, chip mounters, board mounting, etc.

- **High resolution and high contrast**

Supports 2/3" format, 5 mega-pixel CCD camera with 3.45 $\mu$ m pixel pitch. Achieves 140 lp/mm high resolution from center to periphery. Produces sharp, high-clarity images with high-contrast and low resolution loss all the way to the edge.

- **Φ43 mm compact design**

Consistent with the 44 mm-square cases used by many 5 mega-pixel cameras, we have achieved a size reduction to Φ43 mm for the outer diameter. These lenses are an excellent choice for installation on high-performance devices.

- **Extremely small level of optical distortion**

For both the FL-CC2514-5M and the FL-CC1614-5M, optical distortion on the diagonals is less than 1%. TV distortion is held to less than 0.2%. The resulting extremely low-distortion images are also excellent for use in the image measurement field.

- **Bright to the periphery**

Despite the Φ43 mm diameter, the optics accommodate 5 mega-pixels with F1.4 brightness. With peripheral-light-intensity falloff held to an absolute minimum, it is possible to obtain bright and high-resolution images. Although they are wide-angle lenses, with the iris open we were able to raise the peripheral light level to 70% (diagonals) and thereby achieve images that are bright and clear all the way to the periphery.

### FL-CC1614-2M peripheral light intensity



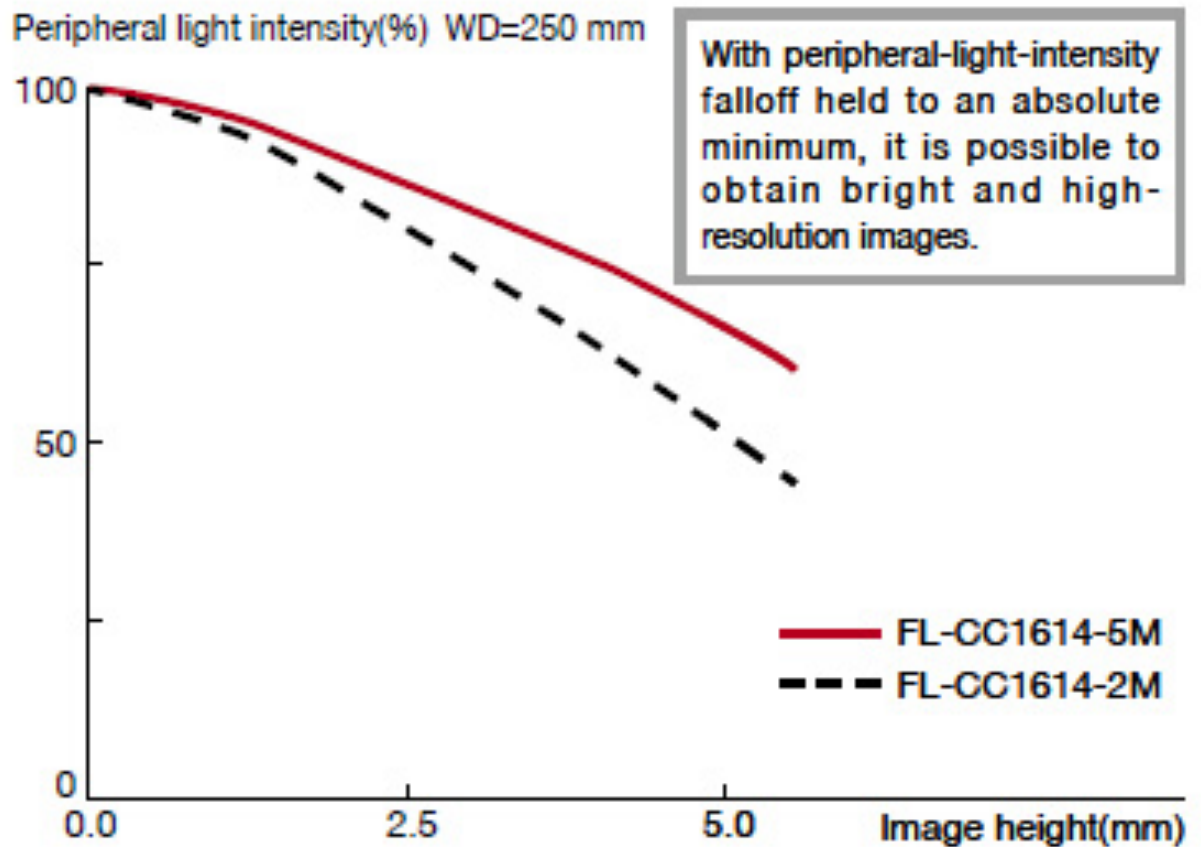
In past megapixel lenses, a certain amount of light-intensity falloff can be seen at the periphery.

### FL-CC1614-5M peripheral light intensity

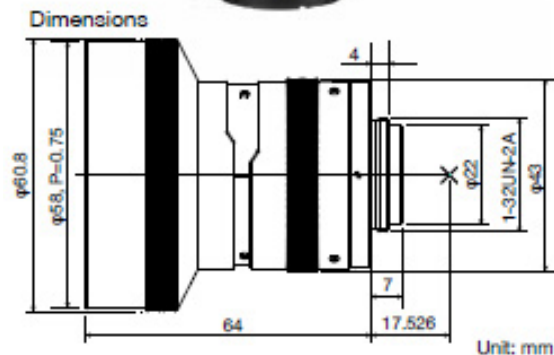


In these lenses for 5-megapixel use, we worked to further raise peripheral light intensity.

### Peripheral light intensity comparison



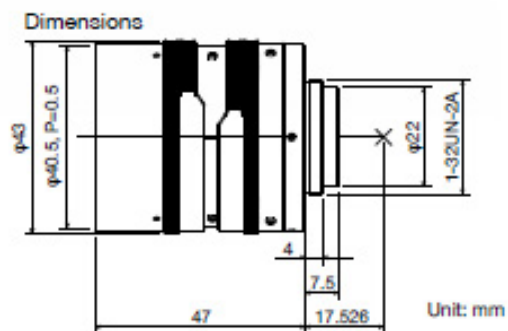
## FL-CC0814-5M



Format size	2/3, 1/1.8, 1/2, 1/3" format	
Focal length	8 mm	
Maximum aperture ratio	1: 1.4	
Iris range	1.4-16	
Mount	C	
Horizontal angle of view	1/3" format	32.9°
	1/2" format	43.2°
	1/1.8" format	48.2°
	2/3" format	57.8°
Minimum object distance	0.1 m	

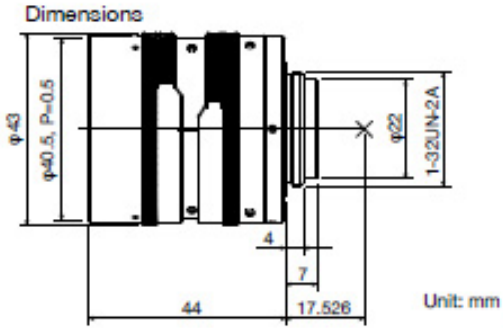
Back focal length	11.5 mm
Filter size	58 P=0.75 mm
Dimensions	φ60.8×64 mm
Weight	260 g
Remarks	Focus & Iris lock screws

## FL-CC1614-5M



Format size	2/3, 1/1.8, 1/2, 1/3" format	
Focal length	16 mm	
Maximum aperture ratio	1: 1.4	
Iris range	1.4-16	
Mount	C	
Horizontal angle of view	1/3" format	17.1°
	1/2" format	22.7°
	1/1.8" format	25.4°
	2/3" format	30.8°
Minimum object distance	0.1 m	
Back focal length	11.5 mm	
Filter size	40.5 P=0.5 mm	
Dimensions	φ43×47 mm	
Weight	140 g	
Remarks	Focus & Iris lock screws	

# FL-CC2514-5M



Format size		2/3, 1/1.8, 1/2, 1/3" format
Focal length		25 mm
Maximum aperture ratio		1: 1.4
Iris range		1.4-16
Mount		C
Horizontal angle of view	1/3" format	11.0°
	1/2" format	14.6°
	1/1.8" format	16.4°
	2/3" format	19.9°
Minimum object distance		0.1 m
Back focal length		12.3 mm
Filter size		40.5 P=0.5 mm
Dimensions		φ43×44 mm
Weight		130 g
Remarks		Focus & Iris lock screws

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